ABSTRACT:

Method and signal processing apparatus for reducing the number of bits of a digital input signal (M_i) comprising the steps of adding a pseudo-random noise signal (N_a) to the digital input signal (M_i) to obtain an intermediate signal (D_i), the pseudo-random noise signal (N_a) being defined by noise parameters (N_p), and quantising the intermediate signal (D_i) having a word length of n bits to a reduced word length signal (M_e) having a word length of m bits, n being larger than or equal to m. The method further comprises the step of quantising the intermediate signal (D_i) comprises a first transfer function which is non-linear, the first transfer function being defined by non-linear device parameters (NLD_p). Also, the present invention relates to a method and signal decoding apparatus for recovering an output signal (M_o) from a reduced word length signal (M_e) provided by the method according to the invention.

(Fig. 1)